

# W5YI REPORT

Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

## Dits & Bits

Fred Maia, W5YI, Editor, P.O. Box 10101, Dallas, TX 75207

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November 1, 1984

## FCC Acts to Implement New Amateur WARC Bands

The FCC has released a Notice of Proposed Rule Making (PR Docket 84-960) looking toward eventual implementation of Amateur Radio Service privileges internationally agreed upon at WARC-79. The Final Acts of the 1979 World Administrative Radio Conference was ratified by the U.S. on September 6, 1983 and carries the weight of an international treaty.

Earlier in the year (January 19, 1984), the Commission added the new WARC amateur bands and changes to the "Table of Allocations" - an authorized list of spectrum segments allocated to the various radio services.

Now that the new ham bands have been officially allocated to the Amateur Radio Service by the U.S., the next step for the Commission is to determine exactly how the amateur community will utilize them. Operating guidelines, authorized emissions and sub-band segment boundaries must all be agreed upon and assigned.

A number of petitions were also filed by several prominent amateurs (and the ARRL) seeking to release the new bands... particularly the new HF bands at 18.068-18.168 and 24.890-24.990 MHz. The League also asked that the new 902-928 MHz band be immediately released to the amateur community. Many commenters responded to the petitions and initial (January '84) Rule Making by

suggesting their own version of how the bands should be used.

The following is a summary of the FCC version of how the new WARC bands should be allocated for use by the ham radio fraternity. (Remember the Rule Making is an NPRM which solicits additional public comment before a final Report & Order is issued.)

### THIRTY METERS - 10.100 to 10.150 MHz:

Present allocation: Band was released to U.S. amateur community on an interim basis during the fall 1982 on a secondary basis. The 10.109 to 10.115 MHz segment was excluded (protected) due to government use of 10.112. Emissions were restricted to CW (A1) and RTTY (F1 frequency shift keying and A2J audio tones keyed with SSB) Voice emissions are not authorized. Amateur stations must not interfere with foreign stations operating in the Fixed Service. Available to General Class amateurs and higher - 200 watt PEP output power limitation.

Proposed allocation: Same except 10.109 to 10.115 MHz exclusion removed. While the FCC has proposed "no special power limitation", the Commission said that amateurs could utilize the entire 10.100 to 10.150 MHz band "during the pendency of this proceeding" with a 200 watt PEP output power limit. Thus the 10.109 to 10.115 MHz "window" no longer

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exists effective immediately. Thirty meter band also to be made available for RACES (Radio Amateur Civil Emergency Service) operation.

## SEVENTEEN METERS - 18.068 to 18.168 MHz.

Present Allocation: Band is presently allocated to the Fixed Service. It was WARC re-allocated to the Amateur and Amateur Satellite Service subject to present Fixed Service users being "reaccommodated" (moved.)

Proposed Allocation: A WARC U.S. footnote provides that the band "remain an alternative allocation to the Fixed Service until July 1, 1989." IRAC (the Interdepartment Radio Advisory Committee which oversees government frequencies in much the same manner that the FCC does in the private sector) "has concluded that the United States government fixed operations in the 18.068-18.168 MHz band would preclude any Amateur Radio Service usage of this band prior to 1989." The FCC did NOT propose earlier amateur access to the seventeen meter band.

## TWELVE METERS - 24.890 to 24.990 MHz.

Present Allocation: Worldwide WARC primary allocation to the Amateur and Amateur-Satellite Service subject to the same "reaccommodation" of present Fixed Service users as the Seventeen Meter band. Again, the band is scheduled to be turned over to the Amateur community on/before July 1, 1989.

Proposed Allocation: The FCC reports "We have been informed by (the) NTIA (National Telecommunications & Information Administration - an advisory agency to the White House) that shared use of this band by the Amateur Radio Service with current United States government fixed operations would be acceptable, given the anticipated low level of solar activity during the next several years." The Commission therefore proposed "immediate implementation of allocation of this band to the Amateur Radio Service and to the Amateur Satellite Radio Service."

The FCC went along with the ARRL recommendation that 24.890-24.930 MHz be reserved exclusively for A1 and F1/A2J

emissions, and that the frequency band 24.930-24.990 MHz be reserved for A1, A3, A4, A5, F3, F4 and F5 emissions.

No special power reductions were proposed by the ARRL or the FCC "other than those which generally govern the Amateur Service." The band would be available for General Class and higher licensees. The Commission said that they were also adding language "to make it clear that amateur operation in this band will continue to be on a secondary basis to international Fixed and Mobile operations which have not yet been reaccommodated."

## 420 TO 430 MHZ AMATEUR BAND

Present Allocation: This band segment is authorized to all U.S. amateurs, Technician Class and above. There is a 50 watt power level restriction around a few military installations.

Proposed Allocation: As part of the WARC-79 accord, Canada withdrew the 420-430 MHz segment from its amateurs and substituted the 902-928 MHz band in its place. Canada reallocated the 420-430 MHz spectrum to their Fixed and Mobile Service. The FCC responded by agreeing to provide protection along the Canadian border so as not to interfere with these operations. A U.S./Canada treaty arrangement on this was entered into on April 7, 1982. The 430-450 MHz segment is not affected.

A boundary extending from the state of Washington to Maine (dubbed "line A") has been determined in which U.S. amateurs will be prohibited from 420-430 MHz operation. Included in the amateur blackout area are such major cities as Seattle, Detroit, Cleveland and Buffalo. The biggest impact will be on amateur television since most ATV repeater and simplex stations operate in this segment.

To reduce the burden, however, the Commission will allow any UHF amateur station already operating in the 420 to 430 MHz segment to continue communications until the FCC makes a final ruling on the matter. "These stations must cease their transmissions

upon notification by us if the Government of Canada objects to their continued operation."

The FCC is also proposing to allow any amateur station to operate in this segment after the Report & Order is issued providing a waiver is obtained from the Commission. The U.S. will first check with Canada to determine the affect of the amateur station on Canadian operations.

## 902 TO 928 MHZ AMATEUR BAND

Present Allocation: This is a new WARC-79 allocated ham band in Region 2 (North & South America.) It is allocated to the Fixed and Mobile Services in the rest of the world. While the band was allocated in 1980 to the Amateur Service on a secondary basis to Government Radiolocation, U.S. amateur use has yet to be authorized.

Proposed Allocation: The ARRL petitioned to implement allocation of this band to the Amateur Radio Service some time ago. The FCC now proposes to do this in all of the United States and its possessions except for Colorado, Wyoming and U.S. possessions in Region 3 where the band is not allocated for the amateur use. A U.S. WARC stipulation prohibits 902-928 MHz amateur operation in Wyoming and Colorado, but "footnote US 267" didn't say why. Usually the reason is due to unspecified defense considerations.

The FCC said that "Amateur operation in this frequency band would be secondary to the operation of Government stations, AVM (Automatic Vehicle Monitoring) systems and ISM (industrial, scientific and medical) devices." Microwave ovens operate in this range and amateurs must accept its interference.

Confusingly the Commission said "...U.S. amateurs would be required to avoid harmful interference to authorized fixed, mobile and broadcasting operations in Regions 1 and 3. (I can't imagine 902-928 MHz transmissions having international implications although I guess in this satellite age, anything is possible.)

Noting that the ARRL "did not seek any division of the 902-928 MHz frequency band into subbands" the FCC proposed that the

entire band be made available to all amateur radio operators above the Novice Class using any authorized emission. No special power limitations were proposed. Repeater operation would be authorized and the League has a band plan all set to go.

Interested persons may file comments on the NPRM proposing to implement the new WARC bands on or before December 17, 1984. Replies are due by Janaury 16, 1986. Formal participants must file original and five copies. (An original and eleven copies if you want each Commissioner to have a copy. Members of the general public who wish to express their interest by commenting informally may do so by submitting one copy. (Refer to PR Docket 84-960. Send comments to: Secretary, FCC, Washington, DC 20554.)

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## ON MULTIPLE TV STATION OWNERSHIP

The FCC has agreed to delay implementation of their 12-12-12 multiple ownership decision. Previously a company could only own up to 7 AM, 7 FM and 7 TV broadcast stations. In July they ruled that firms could own up to 12 of each. In early August they backed down on the TV ownership provision until April 1985.

The reason for the delay is the concern of Congress that concentrating the nation's telecommunications in fewer hands gives them enormous power. Black and hispanic groups also felt that the ruling would have an adverse effect on minority ownership of TV stations.

Jack Valenti, president of the Motion Picture Association (which views broadcast TV as a major competitor) charged "Whoever grabs control of the TV marketplace becomes more dominant and influential than the President of the United States..."

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AMATEUR RADIO OPERATOR EXAMINATION QUESTIONS A booklet containing the FCC Amateur Radio Operator Study Guide and all 1600 actual test questions for all ham classes (Novice through Extra Class) now available for \$2.50 (postpaid) from: THE W5YI REPORT; 1020 Byron Lane; Arlington, TX - 76012 Note our new phone number.... (817) 461-6443

### CABLE BILL EFFECTS BACKYARD DISHES

The Congress passed legislation October 11th deregulating the cable industry - the final day of the 98th session. It now awaits President Reagan's signature which seems assured. While most of the provisions are only of minor interest to radio hobbyists, the section that applies to back-yard satellite dishes has some interesting ramifications.

The president has 10 days in which to sign the bill, which has already passed. But that is 10 days after presentation and the bill has not yet been given to Reagan. Once signed by the president, the Cable Telecommunications Act of 1984 will free cable of much of the municipal regulation that it has been enslaved to.

Some of the more interesting provisions of the cable bill are...

- (1.) - Cable companies can increase rates up to 5% annually "to adjust for inflation" without seeking local government approval.
- (2.) - Requires cable operators to provide by "sale or lease" lock boxes that subscribers can use to prevent children from viewing programming that they feel is "obscene or indecent."
- (3.) - Allows cable ownership by newspapers but not by local television stations. Provides for cable company ownership by telephone companies under certain conditions.
- (4.) - Creates a national standard for privacy protection of cable subscribers by regulating information that can be disseminated by cable companies.
- (5.) - Establishes civil and criminal penalties for the theft of cable services of up to six months imprisonment and a \$1,000 fine for any person stealing cable signals.

The controversial section of the bill applies to owners of backyard TVRO's - privately owned satellite dishes. Thousands have been sold in the last year alone! When the House passed the bill, they tied to it a provision that applies to satellite reception of cable programming. It was amended somewhat

by the Senate, but it is in the final bill that awaits Reagan's signature. Remember that the measure applies only to cable distributed programming.

Basically it says that unencrypted signals (cable programming being relayed to cable systems not scrambled) can be received by private earth station owners without payment if it is not offered to them "via a marketing agreement" where they can purchase the viewing rights. If the cable programmers (i.e. HBO) will sell them the right to watch the satellite signals, then a TVRO owner must pay for that right. HBO has already said that it will market it's product to private satellite owners.

The fee apparently will be negotiated between representatives of the backyard satellite industry (for example: S.P.A.C.E., Society for Private And Commercial Earth stations) and the cable programmer. Satellite signal pirates who watch the satellite programming without payment are subject to a fine.

While the bill is very clear, enforcement of it is not. Enforcement questions were not addressed. It is true, however, that cable programmers can determine which satellite owners are viewing their programs without payment... and without entering private property.

It is done by monitoring the incidental radiation being emitted from the television IF. MDS (Multiple Distribution Service, over-the-air pay TV) operators do this all the time when trying to learn who is receiving pay TV without paying for it. You can also determine which satellite a viewer is watching by measuring the inclination of the dish. It can all be done from the street or alley outside your home.

This brings "privacy concerns" into play. While technologically possible, it may be illegal for a cable programmer to sit out in front of a viewer's residence and "tap" what a resident is doing within the confines of his home. In fact, the Cable Bill specifically prohibits disclosure of viewing habits. The backyard satellite dish provision of the Cable Telecommunications Act of 1984 seems to ask more questions than it answers.

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## AMATEUR RADIO CALL SIGNS ASSIGNED....

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Radio District	Group A Extra	Group B Advan.	Group C Tech/Gen	Group D Novice
Ø	NIØI	KDØSV	NØFTN	KAØTNC
1	KX1B	KB1PK	N1DGG	KA1MDQ
2	NG2T	KD2JJ	N2FEE	KA2VZK
3	KU3E	KC3PG	N3EBV	KA3NFH
4	AA4FG	KI4TN	N4KVR	KB4LPO
5	NS5L	KE5SD	N5HIT	KA5USF
6	WC6Q	KG6LN	N6LDA	KB6GMJ
7	NJ7R	KE7AS	N7GPP	KA7TVV
8	NJ8U	KD8UB	N8GBB	KA8VKH
9	NB8V	KD9LA	N9EUB	KA9SMT
N.Mariana I	AHØD	AHØAC	KHØAG	WHØAAG
Guam	AH2T	AH2BA	KH2BR	WH2AEF
Johnston I.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6U	AH6FQ	NH6CI	WH6BAW
Kure Is.			KH7AA	
Amer.Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAB
Alaska	(*)	AL7GD	NL7EL	WL7BEP
Virgin Is.	KP2L	KP2AT	NP2BE	WP2AEA
Puerto Rico	WP4D	KP4HZ	NP4LG	WP4DSI

(\*) - Group "A" Extra Class format call signs have been used up in Alaska. FCC now issuing Group "B" format to Extra Class licensees.

## SPEAK INTO MY CARRIAGE RETURN....

Kurzweil Applied Intelligence, a little known Massachusetts firm in the voice recognition business, has developed a typewriter that transcribes human speech! The VAT (for voice-activated typewriter/terminal) has a 10,000-word vocabulary and types away at 150 words per minute - normal speaking speed. A user talks into a microphone and the words appear on a CRT for later (or immediate) hard copy printing. Heavy stock investments are being made in the firm by both Wang Laboratories (40%) and Xerox (20%).

Raymond Kurzweil, 36, the son of a music conductor, was described as a boy genius at 12 when he wrote his first computer

program which was bought and distributed by none other than giant IBM! At 15 he won the International Science Fair Award - the best project in the world for that year.

His specialty is digitized sound. At 28, he invented a machine that has been called the greatest advance for the blind since the invention of Braille... a system that reads and dictates regular print. Last year he developed an "orchestra machine" that duplicates 100 instruments and a human chorus to boot for fanatics that want to conduct!

At present, Kurzweil's VAT is "speaker dependent" - that is, the "typewriter" will only respond to specific voices. System owners create a "vocabulary master key" by speaking each of the 10,000 words into a microphone. The words are digitized and stored either on an audio tape or floppy disk for later comparison with dictated speech. Theory of operation is not too much unlike that of "dictionary spelling software" that compares typed copy with stored words. But speaker independent VAT versions are in development.

Using his VAT technology, Kurzweil is now working on a system that will allow the deaf to converse on the telephone in real time at normal speaking speed. Some future ideas include voice steerable automobiles, kitchen robots... even a method of digitizing and transmitting 3-D images of people through telecommunication devices so that they can make presentations at gatherings without actually being there... real "Buck Rogers" stuff.

While industry giants like IBM, Xerox and Bell Labs are working on their own VAT systems, Kurzweil is the first to successfully solve the software maize. He plans to start delivering the \$10,000 systems in 1986. The stakes are big! Industry experts predict that voice-to-hard-copy systems will be a \$3.5 billion business within 5 years!

## MORE 160M EMISSION MODES PROPOSED...

The FCC released a Notice of Proposed Rule Making on October 10 in response to a petition filed by the ARRL requesting that

"I am a currently licensed Extra Class amateur radio operator and wish to be a Volunteer Examiner. I have never had my station or

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER? If so, please send a report program under The W5YI Report program

additional emissions be authorized in the 160 meter amateur band.

At present only CW (A1) and voice (A3) emissions are permitted at 160 meters. The League argued that there is no further need to continue emission limitations since Canadian LORAN-A radiolocation operations have been discontinued.

In support of their request, the ARRL cited the rapid growth of radioteleprinter (RTTY) activity over the past five years as well as the availability of inexpensive personal computers which can be readily adapted to this mission mode. "This increased RTTY activity will require additional RTTY channels," the ARRL said. The League also noted that declining sunspot activity compressed skywave communications into the lower part of the HF bands making the 160 meter medium frequency (MF) band essential at night for certain paths.

The FCC also said that they had received additional comments from the amateur community supporting F3 (narrow band FM) and A5 (slow-scan TV) emissions in the 160 meter band.

Offshore Navigation, Inc., said that they had no objection to the grant of the ARRL petition as long as amateur stations recognize that they operate in the 1900-2000 kHz band on a secondary basis to the Radiolocation Service. "Amateur operators should be warned," they said, "with respect to investing in equipment to operate in the 1900-2000 kHz band that they may be required to cease operation in that band upon activation of the Radiolocation Service allocation."

Racal-Decca Survey, Inc. said that "...since it anticipates that it will have to move many of its existing radiolocation operations in the 1605-1800 kHz band to the 1900-2000 kHz band when radiolocation is displaced to make room for AM broadcasting, investment in amateur radio equipment should be concentrated in bands where amateur operation will be more long term."

While the ARRL said that they thought the concerns of Offshore Navigation, Inc. and

Racal "were irrelevant at this time", the FCC did not agree. The Commission warned amateurs that future rule making proceedings could indeed adversely impact the 1900-2000 kHz ham band.

The FCC did agree, however, that "with the discontinuance of Canadian LORAN-A radio location operations in the 1900-2000 kHz portion of the band, there is no reason to continue to limit emission modes in the 160 meter band. "Therefore we propose to amend the rules to authorize A4, A5, F1, F3, F4 and F5 emissions for the 1800-2000 kHz band."

"As a result of these proposed changes, amateur operators will be able to experiment with various emission modes for the benefit of the entire service. We propose to authorize these emissions throughout the entire 160 meter band and not carve out specific sub-bands within the band where a particular type of emission may be used."

Deadline for comments on the FCC's proposal to add additional emission modes to the amateur 160 meter band is December 20, 1984... replies by January 22, 1986.

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## MORE ON THE 160 METER HAM BAND....

While we are on the subject of 160 meters, let me cover a letter I received last week from Dave Sumner, K1ZZ, ARRL General Manager. He wrote me that "...the errors in your lead story for October 15 are so egregious that they can't be ignored." After consultation with Funk & Wagnals I found that egregious means "outstandingly bad".

Sumner says that WARC-79 did not reallocate the 1900-2000 kHz segment of the 160 meter ham band to the Radiolocation Service. "The... decision to make 1800-1900 kHz exclusively Amateur in this country and the arrangements for 1900-2000 kHz under consideration are a domestic matter."

That might be true, but the FCC released a NPRM (General Docket 80-739) on December 30, 1982, which looked toward implementing the WARC accord clearly showed (page #C45) that in the United States,

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4	AA4FG	KI4TN	N4KVR	KB4LPO
5	NS5L	KE5SD	N5HIT	KA5USF
6	WC6Q	KG6LN	N6LDA	KB6GMJ
7	NJ7R	KE7AS	N7GPP	KA7TVV
8	NJ8U	KD8UB	N8GBB	KA8VKH
9	NB8V	KD9LA	N9EUB	KA9SMT
N.Mariana I	AHØD	AHØAC	KHØAG	WHØAAG
Guam	AH2T	AH2BA	KH2BR	WH2AEF
Johnston I.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6U	AH6FQ	NH6CI	WH6BAW
Kure Is.			KH7AA	
Amer.Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAB
Alaska	(*)	AL7GD	NL7EL	WL7BEP
Virgin Is.	KP2L	KP2AT	NP2BE	WP2AEA
Puerto Rico	WP4D	KP4HZ	NP4LG	WP4DSI

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# W5YI REPORT.....

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November 1, 1984

additional emissions be authorized in the 160 meter amateur band.

At present only CW (A1) and voice (A3) emissions are permitted at 160 meters. The League argued that there is no further need to continue emission limitations since Canadian LORAN-A radiolocation operations have been discontinued.

In support of their request, the ARRL cited the rapid growth of radioteleprinter (RTTY) activity over the past five years as well as the availability of inexpensive personal computers which can be readily adapted to this mission mode. "This increased RTTY activity will require additional RTTY channels," the ARRL said. The League also noted that declining sunspot activity compressed skywave communications into the lower part of the HF bands making the 160 meter medium frequency (MF) band essential at night for certain paths.

The FCC also said that they had received additional comments from the amateur community supporting F3 (narrow band FM) and A5 (slow-scan TV) emissions in the 160 meter band.

Offshore Navigation, Inc., said that they had no objection to the grant of the ARRL petition as long as amateur stations recognize that they operate in the 1900-2000 kHz band on a secondary basis to the Radiolocation Service. "Amateur operators should be warned," they said, "with respect to investing in equipment to operate in the 1900-2000 kHz band that they may be required to cease operation in that band upon activation of the Radiolocation Service allocation."

Racal-Decca Survey, Inc. said that "...since it anticipates that it will have to move many of its existing radiolocation operations in the 1605-1800 kHz band to the 1900-2000 kHz band when radiolocation is displaced to make room for AM broadcasting, investment in amateur radio equipment should be concentrated in bands where amateur operation will be more long term."

While the ARRL said that they thought the concerns of Offshore Navigation, Inc. and

Racal "were irrelevant at this time", the FCC did not agree. The Commission warned amateurs that future rule making proceedings could indeed adversely impact the 1900-2000 kHz ham band.

The FCC did agree, however, that "with the discontinuance of Canadian LORAN-A radio location operations in the 1900-2000 kHz portion of the band, there is no reason to continue to limit emission modes in the 160 meter band. "Therefore we propose to amend the rules to authorize A4, A5, F1, F3, F4 and F5 emissions for the 1800-2000 kHz band."

"As a result of these proposed changes, amateur operators will be able to experiment with various emission modes for the benefit of the entire service. We propose to authorize these emissions throughout the entire 160 meter band and not carve out specific sub-bands within the band where a particular type of emission may be used."

Deadline for comments on the FCC's proposal to add additional emission modes to the amateur 160 meter band is December 20, 1984... replies by January 22, 1986.

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## MORE ON THE 160 METER HAM BAND....

While we are on the subject of 160 meters, let me cover a letter I received last week from Dave Sumner, K1ZZ, ARRL General Manager. He wrote me that "...the errors in your lead story for October 15 are so egregious that they can't be ignored." After consultation with Funk & Wagnals I found that egregious means "outstandingly bad".

Sumner says that WARC-79 did not reallocate the 1900-2000 kHz segment of the 160 meter ham band to the Radiolocation Service. "The... decision to make 1800-1900 kHz exclusively Amateur in this country and the arrangements for 1900-2000 kHz under consideration are a domestic matter."

That might be true, but the FCC released a NPRM (General Docket 80-739) on December 30, 1982, which looked toward implementing the WARC accord clearly showed (page #C45) that in the United States,

1800-1900 kHz would be allocated to the Amateur Radio Service with 1900-2000 kHz assigned to Radiolocation. While the U.S. could have made the 1900-2000 kHz band exclusively Amateur, Fixed, Mobile, Radiolocation or Radionavigation, the FCC clearly chose two years ago to allocate 1900-2000 kHz to Radiolocation. The recent NPRM should not have come as a surprise to anyone.

Dave Sumner also said "What is surprising is not that we face a battle (to retain all of 160), but rather the timing and content of the NPRM in Docket 84-874. Not long ago, FCC was saying that these changes were years away. As far as we know the need for... (Radiolocation spectrum) is still years away, since it will be the end of the decade before a hemispheric plan for AM Broadcasting Band expansion can be ready for implementation... So why the rush?"

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Senator Barry Goldwater, K7UGA, announces plans for an amateur radio expedition to Taiwan, Republic of China. Senator Goldwater has responded to an invitation to operate from Taiwan by requesting a number of ham radio operators to carry out an expedition. The invitation was extended last April by Tim Chen, BV2A (also BV2B on CW) when the senator was in Taiwan.

This event, arrangements of which are still incomplete, is planned for November 20 through November 29, 1984, and will operate under the Senator's specially reserved (but as yet unassigned by the Ministry of Communications in Taipei) callsign, BVØBG. Barry Goldwater was going to go himself, but his schedule involving the present presidential campaign precluded this. The number in the DXpedition party has not been decided yet,

but "something less than six" U.S. amateurs are anticipated.

The objective of the expedition is to promote international goodwill through amateur radio both by personal contacts among the operators and potential operators of the two countries and through the establishment of an amateur station on Taiwan which will be used to contact as many other radio amateurs around the world as possible during the ten day period.

Taiwan is now starting to license other citizens as amateur operators and part of the purpose of the trip is to meet with some of the new licensees and other people who expect to be licensed and give them some ideas on setting up amateur stations.

The operating period includes the Thanksgiving holidays in the United States and the annual CQ Worldwide DX Contest (CW portion) to be held the weekend of November 24-25. The expedition will be led by David Siddall, K3ZJ, a Government communications attorney and long time president of the Capitol Hill Amateur Radio Society.

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## AMATEUR RADIO CALL SIGNS ASSIGNED....

As has been our practice, we are publishing the Amateur Radio station call signs that have been assigned through the first of October 1984.

Radio District	Group A Extra	Group B Advan.	Group C Tech/Gen	Group D Novice
Ø	NIØI	KDØSV	NØFTN	KAØTNC
1	KX1B	KB1PK	N1DGG	KA1MDQ
2	NG2T	KD2JJ	N2FEE	KA2VZK
3	KU3E	KC3PG	N3EBV	KA3NFH
4	AA4FG	KI4TN	N4KVR	KB4LPO
5	NS5L	KE5SD	N5HIT	KA5USF
6	WC6Q	KG6LN	N6LDA	KB6GMJ
7	NJ7R	KE7AS	N7GPP	KA7TVV
8	NJ8U	KD8UB	N8GBB	KA8VKH
9	NB8V	KD9LA	N9EUB	KA9SMT
N.Mariana I	AHØD	AHØAC	KHØAG	WHØAAG
Guam	AH2T	AH2BA	KH2BR	WH2AEF
Johnston I.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Hawaii	WH6U	AH6FQ	NH6CI	WH6BAW
Kure Is.			KH7AA	
Amer.Samoa	AH8B	AH8AB	KH8AD	WH8AAO
Wake Wilkes Peale		AH9AB	KH9AB	WH9AAB
Alaska	(*)	AL7GD	NL7EL	WL7BEP
Virgin Is.	KP2L	KP2AT	NP2BE	WP2AEA
Puerto Rico	WP4D	KP4HZ	NP4LG	WP4DSI

(\*) - Group "A" Extra Class format call signs have been used up in Alaska. FCC now issuing Group "B" format to Extra Class licensees.

## SPEAK INTO MY CARRIAGE RETURN....

Kurzweil Applied Intelligence, a little known Massachusetts firm in the voice recognition business, has developed a typewriter that transcribes human speech! The VAT (for voice-activated typewriter/terminal) has a 10,000-word vocabulary and types away at 150 words per minute - normal speaking speed. A user talks into a microphone and the words appear on a CRT for later (or immediate) hard copy printing. Heavy stock investments are being made in the firm by both Wang Laboratories (40%) and Xerox (20%).

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"aesthetics" and are arbitrarily established.

(5.) - Amateur antenna cases consistently pit licensees against the very communities they seek to serve with public service and emergency communications resulting in the expenditure of funds which can never be recouped to defend a federally-granted right to operate an amateur station in the licensee's home.

(6.) - Most amateur antenna cases are disposed of by summary judgement against an amateur, specifically because the Federal government has never stated its interest in effective, reliable amateur communications. Thus amateurs are denied a basis for arguing that municipalities must not enact restrictions so severe as to preclude effective, reliable amateur communications.

(7.) - Since amateur radio is a non-commercial service, amateurs seldom have financial resources to challenge local ordinances. Rather they are routinely put off the air entirely or forced to operate with inferior, ineffective indoor antennas which increase incidents of radio frequency interference.

(8.) - In 1977 the FCC issued a Public Notice entitled "Local Laws Regulating Radio May be Pre-empted by Communications Act" and discussed the Commission's jurisdiction and pre-emptive authority over local regulation of radio. It offered no means, however, by which a municipality might judge an ordinance as unduly restrictive which should be pre-empted.

(9.) - The FCC has only exhibited concern over antenna height where airport safety is involved. The Rules have no detailed regulation of antenna height, but rather one blanket limitation on height to 200 feet.

(10.) - State and local laws "stand as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress" as reflected in the Federal regulation of amateur radio pursuant to the Communications Act of 1934.

(11.) - The Commission should issue a ruling which states the Commission's intent to pre-empt all local ordinances which provably pre-

clude or significantly inhibit effective, reliable amateur communications and which are not clearly necessary to insure the safety of a proposed antenna installation.

The statement should indicate that while conditions may be placed on the antenna installation, to assure that reasonable local interests are met, they cannot be so restrictive as to prevent antenna effectiveness.

Send one original and four copies of your comments to: Secretary, FCC, Washington, DC 20554. Be certain that your comments state that they are in response to "PRB-1."

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## HEATHKIT TO BECOME HEATH/ZENITH....

Heathkit Electronic Centers (a subsidiary of Zenith) are probably a thing of the past as we know them. Amateur radio equipment now accounts for only a small portion of Heath sales. Computers and related products account for over 50%. Look for the Benton Harbor, Michigan, 64 store chain to completely change their image during the next six months.

They will become "Heath/Zenith Computers and Electronics" and the emphasis will be on computers although the hobby environment will still there, but to a lesser degree. About \$70,000 per store has been targeted for the transformation. Two stores have already been reopened as prototypes.

Word is that not only will Zenith computers be sold, but also those of Hewlett-Packard and Apple. Completion is scheduled for next April. ....

The "Washington (DC) Dossier" has named Kenneth Miller, K6IR, as one of the "Washington 500" - the most powerful people in town. Ken was cited in "National Business." (Also named were Bill McGowan, Chairman of MCI; Bill McSweeney, President of Occidental International Corp.; and George Olmsted, Chairman of Washington International Bank with \$2.7 billion deposits.) Miller, 61, is President and Chief Executive Officer of the Penril Corporation of Rockville Maryland, which designs, develops and markets sophisticated high-tech and other electronic equipment.

## CABLE BILL EFFECTS BACKYARD DISHES

The Congress passed legislation October 11th deregulating the cable industry - the final day of the 98th session. It now awaits President Reagan's signature which seems assured. While most of the provisions are only of minor interest to radio hobbyists, the section that applies to back-yard satellite dishes has some interesting ramifications.

The president has 10 days in which to sign the bill, which has already passed. But that is 10 days after presentation and the bill has not yet been given to Reagan. Once signed by the president, the Cable Telecommunications Act of 1984 will free cable of much of the municipal regulation that it has been enslaved to.

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"aesthetics" and are arbitrarily established.

(5.) - Amateur antenna cases consistently pit licensees against the very communities they seek to serve with public service and emergency communications resulting in the expenditure of funds which can never be recouped to defend a federally-granted right to operate an amateur station in the licensee's home.

(6.) - Most amateur antenna cases are disposed of by summary judgement against an amateur, specifically because the Federal government has never stated its interest in effective, reliable amateur communications. Thus amateurs are denied a basis for arguing that municipalities must not enact restrictions so severe as to preclude effective, reliable amateur communications.

(7.) - Since amateur radio is a non-commercial service, amateurs seldom have financial resources to challenge local ordinances. Rather they are routinely put off the air entirely or forced to operate with inferior, ineffective indoor antennas which increase incidents of radio frequency interference.

(8.) - In 1977 the FCC issued a Public Notice entitled "Local Laws Regulating Radio May be Pre-empted by Communications Act" and discussed the Commission's jurisdiction and pre-emptive authority over local regulation of radio. It offered no means, however, by which a municipality might judge an ordinance as unduly restrictive which should be pre-empted.

(9.) - The FCC has only exhibited concern over antenna height where airport safety is involved. The Rules have no detailed regulation of antenna height, but rather one blanket limitation on height to 200 feet.

(10.) - State and local laws "stand as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress" as reflected in the Federal regulation of amateur radio pursuant to the Communications Act of 1934.

(11.) - The Commission should issue a ruling which states the Commission's intent to pre-empt all local ordinances which provably pre-

clude or significantly inhibit effective, reliable amateur communications and which are not clearly necessary to insure the safety of a proposed antenna installation.

The statement should indicate that while conditions may be placed on the antenna installation, to assure that reasonable local interests are met, they cannot be so restrictive as to prevent antenna effectiveness.

Send one original and four copies of your comments to: Secretary, FCC, Washington, DC 20554. Be certain that your comments state that they are in response to "PRB-1."

.....

## HEATHKIT TO BECOME HEATH/ZENITH....

Heathkit Electronic Centers (a subsidiary of Zenith) are probably a thing of the past as we know them. Amateur radio equipment now accounts for only a small portion of Heath sales. Computers and related products account for over 50%. Look for the Benton Harbor, Michigan, 64 store chain to completely change their image during the next six months.

They will become "Heath/Zenith Computers and Electronics" and the emphasis will be on computers although the hobby environment will still there, but to a lesser degree. About \$70,000 per store has been targeted for the transformation. Two stores have already been reopened as prototypes.

Word is that not only will Zenith computers be sold, but also those of Hewlett-Packard and Apple. Completion is scheduled for next April. ....

The "Washington (DC) Dossier" has named Kenneth Miller, K6IR, as one of the "Washington 500" - the most powerful people in town. Ken was cited in "National Business." (Also named were Bill McGowan, Chairman of MCI; Bill McSweeney, President of Occidental International Corp.; and George Olmsted, Chairman of Washington International Bank with \$2.7 billion deposits.) Miller, 61, is President and Chief Executive Officer of the Penril Corporation of Rockville Maryland, which designs, develops and markets sophisticated high-tech and other electronic equipment.

exists effective immediately. Thirty meter band also to be made available for RACES (Radio Amateur Civil Emergency Service) operation.

### SEVENTEEN METERS - 18.068 to 18.168 MHz.

Present Allocation: Band is presently allocated to the Fixed Service. It was WARC re-allocated to the Amateur and Amateur Satellite Service subject to present Fixed Service users being "reaccommodated" (moved.)

Proposed Allocation: A WARC U.S. footnote provides that the band "remain an alternative allocation to the Fixed Service until July 1, 1989." IRAC (the Interdepartment Radio Advisory Committee which oversees government frequencies in much the same manner that the FCC does in the private sector) "has concluded that the United States government fixed operations in the 18.068-18.168 MHz band would preclude any Amateur Radio Service usage of this band prior to 1989." The FCC did NOT propose earlier amateur access to the seventeen meter band.

### TWELVE METERS - 24.890 to 24.990 MHz.

Present Allocation: Worldwide WARC primary allocation to the Amateur and Amateur-Satellite Service subject to the same "reaccommodation" of present Fixed Service users as the Seventeen Meter band. Again, the band is scheduled to be turned over to the Amateur community on/before July 1, 1989.

Proposed Allocation: The FCC reports "We have been informed by (the) NTIA (National Telecommunications & Information Administration - an advisory agency to the White House) that shared use of this band by the Amateur Radio Service with current United States government fixed operations would be acceptable, given the anticipated low level of solar activity during the next several years." The Commission therefore proposed "immediate implementation of allocation of this band to the Amateur Radio Service and to the Amateur Satellite Radio Service."

The FCC went along with the ARRL recommendation that 24.890-24.930 MHz be reserved exclusively for A1 and F1/A2J

emissions, and that the frequency band 24.930-24.990 MHz be reserved for A1, A3, A4, A5, F3, F4 and F5 emissions.

No special power reductions were proposed by the ARRL or the FCC "other than those which generally govern the Amateur Service." The band would be available for General Class and higher licensees. The Commission said that they were also adding language "to make it clear that amateur operation in this band will continue to be on a secondary basis to international Fixed and Mobile operations which have not yet been reaccommodated."

### 420 TO 430 MHZ AMATEUR BAND

Present Allocation: This band segment is authorized to all U.S. amateurs, Technician Class and above. There is a 50 watt power level restriction around a few military installations.

Proposed Allocation: As part of the WARC-79 accord, Canada withdrew the 420-430 MHz segment from its amateurs and substituted the 902-928 MHz band in its place. Canada reallocated the 420-430 MHz spectrum to their Fixed and Mobile Service. The FCC responded by agreeing to provide protection along the Canadian border so as not to interfere with these operations. A U.S./Canada treaty arrangement on this was entered into on April 7, 1982. The 430-450 MHz segment is not affected.

A boundary extending from the state of Washington to Maine (dubbed "line A") has been determined in which U.S. amateurs will be prohibited from 420-430 MHz operation. Included in the amateur blackout area are such major cities as Seattle, Detroit, Cleveland and Buffalo. The biggest impact will be on amateur television since most ATV repeater and simplex stations operate in this segment.

To reduce the burden, however, the Commission will allow any UHF amateur station already operating in the 420 to 430 MHz segment to continue communications until the FCC makes a final ruling on the matter. "These stations must cease their transmissions

AMATEUR RADIO OPERATOR EXAMINATION QUESTIONS A booklet containing the FCC Amateur Radio Operator Study Guide and all 1600 actual test questions for all ham classes (Novice through Extra Class) now available for \$2.50 (postpaid) from: THE W5YI REPORT; 1020 Byron Lane; Arlington, TX - 76012 Note our new phone number.... (817) 461-6443

### CABLE BILL EFFECTS BACKYARD DISHES

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## RADIO SHACK LOOKS TO THE FUTURE...

It wasn't too long ago that the Tandy/-Radio Shack's marketing philosophy was to sell only private label computers that weren't compatible with IBM. All that has changed now. Tandy has just unveiled a new Model 1200 that is fully IBM-compatible.

The \$4,000 Model 1200 is an upgraded version (hard disk included) of the Tandy 2000 PC and made to compete with the IBM-XT. Radio Shack's share of the microcomputer market has been slipping lately and insiders say that Tandy's entry into the IBM-compatible business may have come too late.

Tandy has also entered into a marketing agreement with Ashton-Tate to carry their line of software programs. (We understand Tandy's initial order was for over \$5 million!) Ashton-Tate has developed such well known packages as "Framework", "Friday" and "dBase III." Some of Ashton-Tate's software will also be modified to run on the Tandy Model 2000.

Looking toward the future, Tandy expects big things from cellular telephone. They have signed many separate agreements with cellular mobile telephone carriers to market their cellular radiotelephone services from Radio Shack Computer and Telephone Centers.

Currently, Tandy is selling Japanese made cellular telephones but next year, Radio Shack will market units made for them in Finland. Cost will be "below \$2,000." A plant in Korea is also nearing completion. Eventually Radio Shack will carry portable and handset units.

Rumors are that Radio Shack cellular radios will eventually be sold at non-Radio Shack outlets. Speaking at Washington, DC, convention, Tandy president, John Roach, said that cellular phones will drop to the \$1,000 range within a couple of years.

## FOR EXPORT ONLY MOBILE PHONES

An interesting line of "For Export Only" full duplex mobile telephones are being sold

along the Mexican border. Distributed by Sam-Hill Enterprises, Inc., of New York City, these "Supercall" radiotelephones have a base station that ties in to the public switched telephone system.

The 49-50 MHz crystal-controlled 10-watt base station transmits to the remote handset. The handset (also 10 watts) transmits back to the base station between 146 and 150 MHz. (Mexico allocates 148 to 149 MHz to their mobile service.)

Two versions are available, a Model #6080KM regular mobile phone and a Model DA-007 with the telephone in a brief case "James Bond style." Range is said to allow phone calls up to 50 miles from a user's base station. Two different 50 Watt Low/70 Watt High "power boosters" are available - one for the base station, another for the remote handset.

While they are strictly illegal to use in the United States, they are marketed on the Texas side of the border supposedly for purchase and use by Mexican citizens.

## COMMODORE TO BEEF UP COMPUTER LINE

Look for Commodore International to market a new 32-bit microcomputer priced at under \$1,000 next year. They are working very hard on it. It will have 512K of RAM.

While Commodore has been king in low-priced computer business, the over \$500 market belongs to IBM, Apple and Radio Shack. The three control 75% of the business. Commodore intends to do something about that. A recent survey showed that the "over \$500" home computer market is the fastest growing segment.

The firm has just begun shipping their new "Commodore Plus 4" which has 4 built in programs. It has 64K of RAM and is not compatible with the present Commodore 64.

Commodore is also working on a 25-line flat panel screen CRT for a new knee-topper they hope to debut. Currently most flat screens are 8 or 16 lines.